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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,337	05/23/2006	Reinhold Braam	2003P15404WOUS	3216

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EXAMINER	
SARWAR, BABAR	
ART UNIT	**PAPER NUMBER**
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/580,337	BRAAM ET AL.	
	Examiner	Art Unit	
	BABAR SARWAR	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6 and 9-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6, 9-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed **on 03/02/2009** have been fully considered but they are not persuasive.

2. **Claims 6, 11, 16** have been amended.

3. **Claims 7, 8** have been cancelled.

4. **Claims 1-5** were previously cancelled.

5. **Claims 6, 9-18** are currently pending.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 11, 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amended **claims 1, 11, and 16** recite the terms **"real world information of interest, lesser number"** which are not recited or stated anywhere in the submitted specification. Thus the claims contain new matter. The specification does disclose providing services such as requesting local weather information, locating an ATM in the vicinity from the service provider (Para 0006).

7. The applicant argued features “wherein the service discovery request message is configured to discover at least one service provider that can purvey information of interest to a service requester, at least some of the information related to a physical location"; “wherein the service discovery reply message includes every element needed to establish a route reply from the service provider to the service requester via said lesser number of the plurality of IP routers, thereby reducing a signaling overhead in the network"; "receiving the reply message by a lesser number of the plurality of IP routers thereby avoiding a flooding of the network message; and adding, at the respective routing table of each of the lesser number of the plurality of IP routers, routing information pertaining to the corresponding reply message to the routing table, wherein a connection between the requester and said at least one service provider is established via said lesser number of the plurality of IP routers, thereby avoiding a signaling over-head, which otherwise would be incurred in the network by multicasting a route request from the provider to the requester" read upon Elizabeth in view of AAPA as follows;

Elizabeth discloses the Ad-Hoc on-demand Distance Vector (AODV) routing protocol built on Destination-Sequence Distance-Vector Routing. Elizabeth discloses that when a source node desires to send a message to some destination node and does not have a valid route to that destination, it initiates a path discovery process to locate the other node. It broadcasts a route request (RREQ) packet to its neighbors, which then forward the request to their neighbors, and so on, until either the destination or the intermediate node with fresh enough route to the destination is located. Elizabeth

further discloses that if a source node moves, it is able to reinitiate the route discovery protocol to find a new route to the destination. If a node along the route moves, its upstream neighbor notices the movement and propagates a link failure notification (an RREP with infinite metric) to each of its active upstream neighbors to inform them of erasure of that part of the route. These nodes propagate the link failure notification to their upstream neighbors, and so on until the source node is reached. The source node may then choose to reinitiate route discovery for that destination if route is still desired **(Page 48: Para 6, 9, Page 49 Para 10)**. Moreover, Elizabeth discloses a BQ-REPLY **process (Page 50: Para 7, Figs. 6a-b, where Elizabeth discloses determining if the nodes are still reachable)**. Thus Elizabeth shows the limitation of "wherein the service discovery request message is configured to discover at least one service provider that can purvey information of interest to a service requester, at least some of the information related to a physical location."

Elizabeth further discloses propagation of the RREQ, and path of the RREP to the source **(Page 48: Para 8, Figs. 3a-b, where Elizabeth discloses destination/intermediate nodes responding by unicasting a route reply (RREP) packet back to the neighbor from which it first received the (RREQ))**. Thus Elizabeth shows the limitations of "wherein the service discovery reply message includes every element needed to establish a route reply from the service provider to the service requester via said lesser number of the plurality of IP routers, thereby reducing a signaling overhead in the network"; "receiving the reply message by a lesser number of the plurality of IP routers thereby avoiding a flooding of the network

message; and adding, at the respective routing table of each of the lesser number of the plurality of IP routers, routing information pertaining to the corresponding reply message to the routing table, wherein a connection between the requester and said at least one service provider is established via said lesser number of the plurality of IP routers, thereby avoiding a signaling over-head, which otherwise would be incurred in the network by multicasting a route request from the provider to the requester.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6, 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elizabeth et al. ("A Review of Current Routing Protocols for Ad Hoc Mobile Wireless Networks" IEEE, April 1999) in view of Applicant Admission of Prior Art, hereinafter referenced as Eli and AAPA.

Consider claims 1, 11, and 16, Eli discloses a decentralized mobile wireless network system **(Fig. 3, where Eli discloses an Ad Hoc mobile wireless network)**. Eli discloses a network service that is available to a service requester **(Fig. 3 elements N1-N8, where Eli discloses source node, intermediate nodes and destination node, therefore network service that is available to a service requester .i.e. the source node)**; a plurality of internet Packet (IP) routers each having a routing **table (Page: Para 8, Fig. 3, where Eli discloses nodes with their routing tables)**; a

service discovery request message that includes a first routing indicator **(Page 48: Para 6, Fig. 3a, where Eli discloses initiation of path discovery process (RREQ), therefore a first routing indicator)** and a request for discovering at least one service provider that can purvey real world information of interest to a service requester, al least some of the information related a physical location indicator **(Page 48: Para 9, Figs. 3, 6, where Eli discloses (RREQ) and (RREP), and movement of the nodes, therefore a physical location indicator)**, wherein the service discovery request message is multicast from the requester via the plurality of IP routers, thereby flooding the network, and wherein each router receives the service discovery request message and updates its respective routing table with routing information pertaining to the received service discovery request message when the service discovery request message includes the first routing indicator **(Page 48:Para 8, Fig. 3a, where Eli discloses multicasting the network with RREQ, and updating the routing tables, therefore flooding the network with service discovery request message)**; at least one service providers receives the request message **(Fig. 3b, where Eli discloses a destination node)**; and a service discovery reply message includes a second routing indicator **(Fig. 3b, where Eli discloses destination node responding by a route reply, therefore second routing indicator)**, wherein the discovery reply message is sent by said at least one service provider that receives the request message and that can provides the information of interest to the service requester, the discovery reply message is sent in direct response to the service discovery request message **(Fig. 3b, where Eli discloses destination node responding by a route reply, therefore**

destination node providing the information of interest to the service requester), wherein the discovery reply message is received by a lesser number of the plurality of IP routers, thereby avoiding a flooding of the network message **(Page: 48, Para 8, Fig. 3b, where Elizabeth discloses destination/intermediate nodes responding by unicasting a route reply (RREP) packet back to the neighbor from which it first received the (RREQ), therefore avoiding a flooding of the network message)** and wherein the respective routing table of each of the lesser number a plurality of routers is updated with information pertaining to the corresponding reply message when the reply message includes the second reining indicator, and wherein a connection between the requester and said at least one service provider providing the service is established via said lesser number of the plurality of IP routers, thereby reducing a signaling overhead in the network **(Fig. 3b, where Elizabeth discloses destination node responding by unicasting a route reply (RREP) packet back to the neighbor from which it first received the (RREQ), and intermediate nodes setting up forward node entries, therefore updating routing tables and reducing a signaling overhead in the network)**.

Eli does not explicitly disclose at least one service provider that can purvey real world information of interest to a service requester. AAPA disclose at least one service provider that can purvey real world information of interest to a service requester **(Fig. 4 element 3, where AAPA discloses service providers purveying real world information of interest to a service requester)**. Therefore it would have been obvious to one of ordinary skills in the art at the time the invention was made to modify Eli with

the teachings of AAPA so as to reduce the overhead issue by uncasting RREP to the source node as discussed in **Para 0004**.

Consider **claim 9**, the combination teaches everything claimed as implemented above (see claim 6). In addition, Eli discloses wherein the request and reply messages are in accordance to a Ad hoc On Demand Distance Vector Routing Protocol or a Dynamic Source Routing Protocol for Mobile Ad hoc Networks **(Page: 48, Para 5, Fig. 3a-b, where Eli discloses an A-Hoc on Demand Distance Vector Routing Protocol)**.

Consider **claim 10**, the combination teaches everything claimed as implemented above (see claim 9). In addition, Eli discloses wherein the protocol of the request and reply message is extended such that on receipt of the expanded messages the routing tables are updated with routing information **(Page 48: Para 8, Figs. 3a-b, where Eli discloses updating of the routing tables)**.

Claim 12, the combination teaches everything claimed as implemented above (see claim 10). In addition, Eli discloses that the request message includes an indicator indicating to the receiving routers to add routing information pertaining to the received request message **(Page: Para 8, Fig. 3, where Eli discloses that nodes update their routing tables)**.

Consider **claim 13**, combination teaches everything claimed as implemented above (see claim 10). In addition, Eli discloses that the reply message includes an indicator indicating to the receiving routers to add routing information pertaining to the received reply message **(Page 48: Para 8, Fig. 3b, where Eli discloses that the**

intermediate nodes update their routing tables by setting up forward node entries).

Claim 14, as analyzed with respect to the limitations as discussed in claim 9.

Consider **claim 15**, the combination teaches everything claimed as implemented above (see claim 10). In addition, Eli discloses that wherein the portion of the routers is determined via a route/path determined from multicasting **(Page 48: Para 6, Fig. 3a-b, where Eli discloses a path discovery process)**.

Claim 17, as analyzed with respect to the limitations as discussed in claim 15.

Claim 18, as analyzed with respect to the limitations as discussed in claim 9.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BABAR SARWAR whose telephone number is (571)270-5584. The examiner can normally be reached on MONDAY TO FRIDAY 09:00 A.M -05:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NICK CORSARO can be reached on (571)272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BS/

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